

AMENDMENTS TO THE CLAIMS

(IN FORMAT COMPLIANT WITH THE REVISED 37 CFR 1.121)

1. (CURRENTLY AMENDED) A method for interconnecting a plurality of dies, comprising the steps of:

(A) receiving a plurality of interconnect requirements for said plurality of dies, said plurality of interconnect requirements comprising a priority order for each of a plurality of nets;

(B) calculating a position and an angle for one of said plurality of dies relative to a substrate mounting said plurality of dies in response to said plurality of interconnect requirements; and

(C) routing said plurality of nets among said plurality of dies and a plurality of substrate pads on said substrate, said plurality of substrate pads defining external connections.

2. (CURRENTLY AMENDED) The method according to claim 21, wherein said plurality of interconnect requirements comprise a priority order for each of said plurality of nets.

3. (CURRENTLY AMENDED) The method according to claim 1, wherein step (C) further comprises the sub-step of routing said

plurality of nets one at a time in descending order of said priority order.

4. (CURRENTLY AMENDED) The method according to claim 3, further comprising the step of rotating one of said plurality of dies in response to a target net of said plurality of nets having a shortest possible length requirement of said plurality of interconnect requirements.

5. (CURRENTLY AMENDED) The method according to claim 3, further comprising the step of moving one of said plurality of dies in response to said target net having a shortest possible length requirement.

6. (CURRENTLY AMENDED) The method according to claim 1, further comprising the step of rotating one of said plurality of dies in response to a target net of said plurality of nets failing to meet at least one of said plurality of interconnect requirements.

7. (CURRENTLY AMENDED) The method according to claim 1, further comprising the step of moving one of said plurality of dies in response to said target net failing to meet at least one of said plurality of interconnect requirements.

8. (CURRENTLY AMENDED) The method according to claim 1, wherein a trace group comprises at least two nets of said plurality of nets routed together.

9. (CURRENTLY AMENDED) The method according to claim 8, wherein said plurality of interconnect requirements comprise a maximum delay variation among said at least two nets of said trace group.

10. (CURRENTLY AMENDED) The method according to claim 1, wherein said plurality of interconnect requirements comprise at least one delay from a group of delays consisting of a shortest possible delay, a maximum delay, a range of delays, and a ratsnest delay.

11. (CURRENTLY AMENDED) A storage medium for use in a computer for interconnecting a plurality of dies, the storage medium recording a computer program that is readable and executable by the computer, the computer program comprising the steps of:

(A) receiving a plurality of interconnect requirements for said plurality of dies;

(B) calculating a position and an angle for one of said plurality of dies relative to a substrate mounting said plurality

of dies in response to said plurality of interconnect requirements;  
10 and

(C) routing a plurality of nets among said plurality of dies and a plurality of substrate pads on said substrate, said plurality of substrate pads defining external connections.

12. (CURRENTLY AMENDED) The storage medium according to claim 11, wherein said plurality of interconnect requirements comprise a priority order for each of said plurality of nets.

13. (CURRENTLY AMENDED) The storage medium according to claim 12, wherein step (C) further comprises the sub-step of routing said plurality of nets one at a time in descending order of said priority order.

14. (CURRENTLY AMENDED) The storage medium according to claim 13, further comprising the step of rotating one of said plurality of dies in response to a target net of said plurality of nets having a shortest possible length requirement of said plurality of interconnect requirements.  
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15. (CURRENTLY AMENDED) The storage medium according to claim 13, further comprising the step of moving one of said

plurality of dies in response to said target net having a shortest possible length requirement.

16. (CURRENTLY AMENDED) The storage medium according to claim 11, further comprising the step of rotating one of said plurality of dies in response to a target net of said plurality of nets failing to meet at least one of said plurality of interconnect requirements.

17. (CURRENTLY AMENDED) The storage medium according to claim 11, further comprising the step of moving one of said plurality of dies in response to said target net failing to meet at least one of said plurality of interconnect requirements.

18. (CURRENTLY AMENDED) The storage medium according to claim 11, wherein a trace group comprises at least two nets of said plurality of nets routed together.

19. (CURRENTLY AMENDED) The storage medium according to claim 18, wherein said plurality of interconnect requirements comprise a maximum delay variation among said at least two nets of said trace group.

20. (CURRENTLY AMENDED) An apparatus comprising:

means for receiving a plurality of interconnect requirements for a plurality of dies;

5 means for calculating a position and an angle for one of said plurality of dies relative to a substrate mounting said plurality of dies in response to said plurality of interconnect requirements; and

10 means for routing a plurality of nets among said plurality of dies and a plurality of substrate pads on said substrate, said plurality of substrate pads defining external connections.

21. (CURRENTLY AMENDED) A method for interconnecting a plurality of dies, comprising the steps of:

(A) receiving a plurality of interconnect requirements for said plurality of dies;

5 (B) calculating a position and an angle for one of said plurality of dies relative to a substrate mounting said plurality of dies in response to said plurality of interconnect requirements;

10 (C) routing a plurality of nets among said plurality of dies and a plurality of substrate pads on said substrate, said plurality of substrate pads defining external connections; and

(D) rotating one of said plurality of dies in response to a target net of said plurality of nets failing to meet at least one of said plurality of interconnect requirements.